

KCW PRELIMINARY BLASTING PLAN

The final Kingdom Community Wind blasting plan will, at a minimum, include the following requirements:

A. Pre-Blast Surveys / Notifications

Pre-blast surveys will be offered to all property owners within a 2,500-foot radius of the blast site. Appropriate notices will be given and appointments arranged for those owners who desire a survey. Pre-blast surveys will be conducted by a representative of the selected blasting contractor. Results of those surveys will be documented through video or still photographs and appropriate narration or written reports.

B. Blast Monitoring

All blasts will be monitored by a representative of the selected blasting contractor, who has been properly trained in the setup and use of seismic monitoring equipment. At least one seismograph will be in use at all times. Placement of monitoring equipment will be at the nearest structure to the blast site. Results of blast monitoring will typically be available before the next blast, usually immediately following a blast. Results can be reviewed and modifications can be made to the blast design for the next blast if necessary.

C. Sequence of Blasting

All blasting operations will be strictly coordinated with the General Contractor, Green Mountain Power Corporation and the appropriate engineers. Emphasis will be on the safe and efficient removal of the rock existing on this project without impact to surrounding structures. Blasts will be developed so as to create adequate relief which will minimize ground vibrations and offer the greatest protection possible to the surrounding structures.

D. Blasting Procedures

1. Blasting operations shall commence after 7:00 AM and cease before 6:00 PM, Monday through Friday.
2. Blasting cannot be conducted at times different from those announced in the blasting schedule except in emergency situations, such as electrical storms or public safety required unscheduled detonation.

3. Warning and all-clear signals of different character that are audible within a range of one-half mile from the point of the blast shall be given. All persons within the permit area shall be notified of the meaning of the signals through appropriate instructions and signs posted.

4. Access to blasting area shall be regulated to protect the public from the effects of blasting. Access to the blasting area shall be controlled to prevent unauthorized entry before each blast and until the perimeter's authorized representative has determined that no unusual circumstances exist after the blast. Access to and travel in or through the area can then safely resume.

5. Areas in which charged holes are awaiting firing shall be guarded, barricaded and posted, or flagged against unauthorized entry.

6. All blasts shall be made in the direction of the stress relieved face previously marked out or previously blasted.

7. All stemming shall be minimum, as specified using clean, dry 3/8" crushed stone.

8. Blasting mats shall be used as necessary to cover blasts.

9. The blasting contractor shall ensure that extra safety and judgment is exercised by the blaster to prevent simultaneous blasting of numerous holes.

E. Blasting Mats

Blasting mats and backfill will be used to control excessive amounts of rock movement when blasting in close proximity to structures. Placement and number of mats are typically determined by the blaster. Mats will be placed so as to protect all people and structures on, or surrounding the blast site property.

F. Blast Security and Warning Whistles

Each blast will be preceded by a security check of the affected area and then a series of warning whistles. Communications will be made with job site supervisors and local officials as required to ensure the safest possible operation. All personnel in the vicinity closest to the blast area will be warned. The warning whistles will follow the following sequence:

3 Whistles	–	5 Minutes to Blast
2 Whistles	–	1 Minute to Blast
1 Whistle	–	All clear

The blast site will be examined by the blaster prior to the all clear signal to determine that it is safe to resume work. No blast will be fired until the area has been secured and determined safe.

G. Explosives

All explosives will be delivered to the job site on a daily basis. There will be no overnight storage. Only the amount of explosives required to perform the day's work will be brought to the site. All explosives will be stored in approved magazines when not in use.

The Contractor shall submit for review technical data and MSDS sheets for explosive products proposed for use on this project. No explosives containing perchlorates will be used on this project. Any one of the approved products, or a combination of these products may be in use at any one time on the site.

H. Blaster Qualifications

All selected blasting contractor's blasters on this job, will be licensed in the state of Vermont and have received various amounts of training in the safe use and handling of explosives.

I. Blasting Personnel

All blasting operations shall be conducted by experienced, trained and competent persons who understand the hazards involved. Persons working with explosive materials shall:

1. Have demonstrated knowledge of, and a willingness to comply with, safety and security requirements.
2. Be capable of using mature judgment in all situations.
3. Be of good physical condition and not addicted to intoxicants, narcotics, or other similar types of drugs.
4. The person(s) responsible for the explosives shall possess current knowledge of the local, State and Federal laws and regulations applicable to his work.
5. The person(s) responsible for the explosives shall have obtained a Certificate of Competency or a license as required by State law.

J. Licenses and Permits

The selected blasting contractor will be fully licensed and insured for the transportation, use, and handling of explosives. Evidence of insurance will be provided prior to the work. Blasting permits will be applied for, as required from the local authorities, by the selected blasting contractor before blasting begins.

K. Blasting Vibration

Blast vibration will be monitored at the blast site, typically at the structure(s) closest to the blast site. Vibration limits will closely follow limits described in the project's specifications and the State Regulations. Blast designs will be modified as required to stay within the guidelines and meet project schedules as well. Blasting operations will be modified accordingly when approaching buildings and utilities.

L. Blast reports

Blast reports will be filled out for each blast and copies supplied as needed.